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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/014,401	01/27/1998	KATSUAKI MATSUI	98-0047A	4465

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EXAMINER

CUNNINGHAM, TERRY D

ART UNIT PAPER NUMBER

2816

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

57m

<b>Office Action Summary</b>	<b>Application No.</b> 09/014,401	<b>Applicant(s)</b> MATSUI ET AL.	
	<b>Examiner</b> Terry D. Cunningham	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3,5-8,11,12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,12 and 14-19 is/are allowed.
- 6) ☒ Claim(s) 3 and 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Summary of changes in this action***

1. Examiner has found Applicant's remarks concerning claims 11, 12 and 14-19 to be persuasive. Therefore, the art rejections to these claims have hereby been removed.

### ***Claim Rejections - 35 USC § 112***

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, the language in lines 7-8 is not understood. It appears this language is stating that the "control signal" has the "extracted short wave noise supplied thereto". However, it is not understood how "noise" can be "supplied" to a "signal". Clearly, "noise" can be supplied to a node not a signal. It appears Applicant is intending to state that the "noise" is --added-- or --superimposed-- onto the "signal".

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3, 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (USPN 5,936,455).

With respect to claims 5-7, Kobayashi et al. disclose, in Fig. 9, a circuit comprising: "a reference voltage generation circuit which generates a reference voltage (voltage at that gate 803); "an output circuit (806 and 810) which generates an output voltage (Vmid); "a differential

Art Unit: 2816

amplifier (802-805) which generates a control signal (at the drain of 801) based on the reference voltage and the output voltage”; and “a first noise control circuit (807 and 811)”, all connected and operating similarly as recited by Applicant.

With respect to claim 3, clearly the above circuit to Kobayashi et al. will provide the recited method.

Examiner has fully considered Applicant’s remarks for the above rejection and has not found them to be persuasive. While the reference to Kobayashi et al. may not use similar language concerning extraction of the “short wave noise”, it is clear that the disclosed circuitry provides the same operation. The circuit of the present invention merely provides low-pass filtering to provide this operation. Clearly, the reference to Kobayashi et al. is low-pass filtering the output of the “reference voltage generation circuit”, providing the same operation.

Claim 8 now more clearly and more specifically recites the use of a “variable” capacitor, rather than a “variable-type capacitor”. Clearly, a “variable-type capacitor” can broadly be read on different types of capacitors. This change in scope necessitates the following new rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (USPN 5,936,455). In the above-discussed reference to Kobayashi et al., there is no express

disclosure of what type of capacitor is used for 811. However, it is notoriously well known by one skilled in the art that the use of variable capacitors provides the advantage of providing multiple circuit configurations without making circuit modifications. Therefore, it would have been obvious for one skilled in the art to use a variable capacitor for the broad capacitor 811 if the circuit to Kobayashi et al. for the expected advantage of providing multiple circuit configurations without making modifications. It is further noted that since element 807 is a resistor-connected transistor, it would be more than reasonable to consider such to be a resistor. Further, a "resistor-connected transistor" can inherently be variable by changing the gate voltage.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry Cunningham whose telephone number is 571-272-1742. The examiner can normally be reached on Monday-Thursday from 7:30 to 6:00.

Art Unit: 2816

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC  
May 4, 2005

  
Terry D. Cunningham  
Primary Examiner  
Art Unit 2816